AS 1944—1987
UDC 621.642.02-777:615.471

Australian Standard®
1944—1987

MEDICAL GAS CYLINDER IDENTIFICATION

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

B

This Australian standard was prepared by Committee ME/2, Gas Cylinders. It was approved on behalf of the Council of the Standards Association of Australia on 18 December 1986 and published on 2 March 1987.

The following interests are represented on Committee ME/2:

Aluminium Development Council

Australasian Steamship Owners Federation

Australian Chamber of Commerce

Australian Gas Association

Australian Liquefied Petroleum Gas Ltd

Australian Underwater Federation

Australian Welding Institute

Board of Fire Commissioners, N.S.W.

Bureau of Steel Manufacturers of Australia

Confederation of Australian Industry

Department of Defence

Department of Employment and Industrial Affairs, Qld

Department of Industrial Relations, N.S.W.

Department of Labour and Industry, Tas.

Department of Labour, S.A.

Department of Labour, Vic.

Department of Mines and Energy, N.T.

Department of Mines, Qld

Department of Occupational Health, Safety and Welfare, W.A.

Department of Territories

Fire Protection Industry Association of Australia Ltd

Insurance Council of Australia Ltd

Railways of Australia Committee

AUSTRALIAN STANDARD

MEDICAL GAS CYLINDER IDENTIFICATION

AS 1944—1987

First published (as Supplement No 2 to AS CB4)....1957
AS 1944 first published.....1976
Second edition.....1984
Third edition.....1987

PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY, N.S.W.
ISBN 0 7262 4522 4

PREFACE

This edition of this standard was prepared by the Association's Committee on Gas Cylinders, to supersede AS 1944—1984. It is one of three standards providing separate systems for the identification of refrigerant gas cylinders (AS 1942), industrial gas cylinders (AS 1943), and medical gas cylinders. The systems involve the legible marking of the cylinder with the name, or abbreviated symbol, or where applicable refrigerant number of the contained gas, and specified colour(s) for external surfaces.

This standard continues to follow the colours specified for those gases also listed in BS 1319, Specification for Medical Gas Cylinders, Valves and Yoke Connections, except that the blue specified in combination with white for nitrous oxide in oxygen is French Blue and not Azure Blue as in BS 1319.

The colours align with International Standard ISO 32, Gas Cylinders for Medical Use—Marking for Identification of Content, but this standard provides for additional mixtures, up to three end colours, and the abbreviated symbol or formulas rather than both.

Colours are specified by reference to BS 381C:1964, Colours for Specific Purposes, which was endorsed as AS K185. A later standard (BS 381C:1980) lists some referenced colours as obsolescent, and does not give individual cards for those colours. Therefore, while some colours are fully provided in BS 381C:1980, it will be necessary to refer to the 1964 edition (available for viewing at SAA Information Centres) for those not so provided.

AS 2700, Colour Standards for General Purposes, provides equivalent colours but does not use the same colour names and codes for the equivalent colours. The names and codes of AS 2700 are expected to be adopted by the compressed gas industry in due course, but, because of the possible extreme consequences of wrong contents identification, the change from BS 381C to AS 2700 colour names and codes must be gradual. Therefore, BS 381C colours and codes are specified at this time with AS 2700 equivalents also shown.

It is important for safety reasons that colours specified for gas cylinder contents identification not be used on a gas cylinder in any other context.

CONTENTS

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
MEDICAL GAS CYLINDER IDENTIFICATION

1 SCOPE. This standard specifies the markings and colour code to identify the contents of cylinders to be used in Australia in accordance with AS 2030.1 and AS 2030.4 for the storage and transport of compressed medical gases. The cylinders are of water capacity exceeding 0.1 kg but not exceeding 500 kg. The markings also provide for identification of cylinders for liquid withdrawal fitted with eductor tubes.

NOTES:

1. The requirements of this standard in no way displace any Statutory Authority requirements to comply with AS 1216, Part 1.
2. Identification of industrial gas cylinders is specified in AS 1943, and of refrigerant gas cylinders in AS 1942.

2 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

AS 1216	Classification, Hazard Identification and Information Systems for Dangerous Goods Part 1—Classification and Class Labels for Dangerous Goods
AS 1942	Refrigerant Gas Cylinder Identification
AS 1943	Industrial Gas Cylinder Identification
AS 2030.1	SAA Gas Cylinders Code, Part 1—Cylinders for Compressed Gases Other than Acetylene
AS 2030.4	SAA Gas Cylinders Code, Part 4—Welded Cylinders—Insulated
AS 2700	Colour Standards for General Purposes
AS K185	Colours for Specific Purposes*
BS 381C:1964	Colours for Specific Purposes*

3 DEFINITIONS. For the purpose of this standard, the definitions given in AS 2030.1, and the following definition apply:

Medical gas—a gas or gas mixture in a cylinder for use for patient care, including therapeutic, diagnostic and prophylactic application, and for powering surgical tools.

NOTE: A gas or a gas mixture in a cylinder for portable self-contained breathing apparatus, but not for patient care, is considered not to be medical gas for the purposes of this standard.

4 IDENTIFICATION.

4.1 General. The contents of a cylinder shall be identified by marks in accordance with Clause 4.2 and colour(s) in accordance with Clause 4.3. A cylinder fitted with an eductor tube for liquid withdrawal shall be identified in accordance with Clause 4.4. The size and location of marks shall be in accordance with Clause 4.5.

4.2 Marks.

4.2.1 *Basic marks.* The cylinder surface shall be legibly marked by labelling (which cannot be readily detached) or stencilling, preferably off the cylindrical part of the body, to show—

(a) the words 'COMPRESSED', 'MEDICAL', and 'KEEP CYLINDER COOL'; and

(b) the contents, as given by—

(i) name(s) of the gas(es) as listed in Table 1; or

(ii) abbreviated symbol(s) as listed in Table 1.

NOTES:

1. Where Table 1 does not list the gas(es), refer to AS 2030.1.
2. Statutory Authorities may require additional marks.

4.2.2 *Special condition marks or marking of mixtures.* Where the contents of the cylinder has a special condition or the constituents are in special or laboratory proportions such as for a mixture, the cylinder shall be marked by labelling (which cannot be readily detached) or stencilled to show the special condition and/or special proportions. The order of gas names shall be in descending order of percentage of the total mixture, and the percentage of each minor constituent shall immediately precede the name of that constituent.

Example:

10 percent Oxygen in Helium.

4.3 Colour(s).

4.3.1 *Regions and colour(s).* The cylinder shall have regions coloured in accordance with Clause 4.3.2 and Clause 4.3.3.

NOTE: Painting or other surface treatments are acceptable methods of colouring.

4.3.2 *Valve end of cylinder.* When viewed from the valve end of the cylinder, a region of identifying colour(s) shall be visible. This region should not extend to the cylindrical portion of the cylinder. The colour(s) shall be in accordance with Table 1 for the nominated gas or gas mixture and shall form diametrically opposite 90-degree sectors where two sector colours are shown, and diametrically opposite 60-degree sectors where three sector colours are shown.

4.3.3 *Body of cylinder.* The remainder of the cylinder surface, except the bottom surface for which colouring is optional, shall be coloured in accordance with Table 1 for the nominated gas or gas mixture.

Where the constituents of a binary mixture are nominally equal, the selection of the constituent to determine body colour may be arbitrary except where specified in Table 1.

* These standards are obsolete—see footnote to Table 2.